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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/549,133	04/13/2000	Steven M. Swam	2316.1175US01	7533
23552	7590	10/12/2005	EXAMINER	
MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903			SINGH, RAMNANDAN P	
			ART UNIT	PAPER NUMBER
			2646	

DATE MAILED: 10/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/549,133

Applicant(s)

SWAM ET AL.

Examiner

Ramnandan Singh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28, 30-40, 42-47 and 49-69 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 28, 30-40, 42-47, 49-51, 53-56 and 66-69 is/are allowed.
- 6) ☒ Claim(s) 1-4, 9-23, 52, 57-59, 64 and 65 is/are rejected.
- 7) ☒ Claim(s) 5-8, 24-27 and 60-63 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date Sept. 12, 2005.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

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DETAILED ACTION

Response to Arguments

1. In view of the Applicant's arguments filed on Sept. 12, 2005; the Final office action mailed July 12, 2005 is withdrawn. Further, the Applicant's arguments are moot in view of the new ground(s) of rejection.

2. Status of Claims

Claims 29, 41 and 48 are cancelled.

Claims 1-28, 30-40, 42-47 and 49-69 are pending.

Claim Objections

3. Claim 33 is objected to because of the following informalities:

Claim 33 recites the limitation " a first card edge **connectors**" in line 9.

Replace the word "**connectors**" with the word "**connector**".

Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1-4, 9-23, 52, 57-59, 64-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frazier et al [US 6,430,288 B1] in view of Kim et al [US 6,683,862 B1].

Regarding claim 1, Frazier et al teach a telecommunication component (i.e. **splitter assembly 10**), as shown in Fig. 1, comprising:

- a circuit board (i.e. **a splitter circuit on a card**) [col. 3, lines 32-45; col. 6, lines 17-23];

- a first multi-pair cable connector for inputting twisted pair, mixed data/voice signals to the circuit board (i.e. **card**);

- a second multi-pair cable connector for outputting twisted-pair, voice signals from the circuit board (i.e. **card**);

- a third multi-pair cable connector for outputting twisted pair, data signals or mixed data/voice signals from the circuit board [col. 6, lines 29-56; col. 2, lines 44-58; col. 3, lines 46-54]. Further, first tracings, second tracings and third tracings are not shown which are used to maintain electrical separation between two connectors. In addition, since there is only one edge connector with the interface circuit connected to the Splitter, the contacts are normally closed.

Frazier et al do not teach a card edge connector of an interface circuit (Note: Examiner assumes one card edge connector connected to the circuit board (i.e. splitter card)).

Kim et al teach an interface card (61-3) having one edge connector, connected to splitter (62) [Fig. 2; col. 4, lines 17-26; col. 4, lines 43-53; col. 5, lines 23-40]. It is nevertheless a teaching to one of ordinary skill in the art to apply the same to other applications.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Kim et al with Frazer et al in order to enable the splitter to receive signals from a transmission system.

Claim 15 is essentially similar to claim 1 except for a circuit board (i.e. **a splitter circuit on a card**) aligned generally at a perpendicular orientation relative to the reference back plane. Although Frazier et al teach a splitter assembly (10) having a housing 12 and circuit board providing no specific orientation [Fig. 1; col. 2, lines 44-58], it would have been obvious to one of ordinary skill at the time the invention was made to use any orientation for the circuit board relative to the reference back plane to accommodate the splitters subject to circuit, system and design constraints.

Claims 59, 64, 65 are essentially similar to claim 15 and are rejected for the reasons stated above.

Claim 52 is essentially similar to claim 1 except for at least 24 POTS splitters.

Frazier et al also disclose the splitter assembly that includes a plurality of POTS splitter card that includes at least 24 POTS splitter [Abstract; col. 6, lines 29-61].

Claim 57 is essentially similar to claim 15 except for at least 24 of the POTS splitters. Frazier et al also disclose the splitter assembly comprising a plurality of POTS splitter cards that may include 24 POTS splitter cards or more [Abstract; col. 6, lines 29-61].

Claim 58 is essentially similar to claim 57 and is rejected for the reasons stated above.

Regarding claim 2, Frazier et al further teach the splitter card including a plurality of splitters for splitting the mixed data/voice signals into data signals and the voice signals [Abstract; col. 6, lines 29-56].

Claim 16 is essentially similar to claim 2 and is rejected for the reasons stated above.

Regarding claim 3, Frazier et al further teaches a splitter having POTS contacts [col. 1, lines 61-67].

Claim 17 is essentially similar to claim 3 and is rejected for the reasons stated above apropos of claim 3.

Regarding claim 4, Frazier et al also disclose the splitter assembly comprising a plurality of POTS splitter cards that may include 24 POTS splitter cards or more [Abstract; col. 6, lines 29-61].

Regarding claim 9, although Frazier et al teach a splitter assembly (10) having a housing 12 and circuit board providing no specific orientation [Fig. 1; col. 2, lines 44-58], it would have been obvious to one of ordinary skill at the time the invention was made to use any orientation for the circuit board relative to the reference back plane to accommodate the splitters subject to circuit, system and design constraints.

Regarding claims 10-14 and 18-23, the limitations are shown above.

Allowable Subject Matter

6. Claims 28, 30, 31, 32, 66, 33, 34, 67, 35, 36, 68, 37, 38-40, 42-43, 44-47, 49-50, 51, 53-56 and 69 are allowable.

7. Claims 5-8, 24-27, 60-62 and 63 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Examiner's Statement of Reasons for Allowance:

This invention relates to a splitter architecture for a telecommunications system. Claim 69 identifies the uniquely distinct feature of the splitter architecture comprising: a plurality of splitter cards mounted within the chassis, each of the splitter cards including a plurality of POTS splitters, each of the splitter cards being perpendicular to the back plane; and a plurality of card edge connectors arranged to electrically interconnect each of the backplane circuit boards with one of the plurality of splitter cards; wherein each of the card edge connectors includes a first card edge connector piece and a second card edge connector piece, the first card edge connector piece is mounted on a second opposite edge of the backplane circuit board, and the second card edge connector piece is mounted on the splitter card. As such, claim 69 requires combination of an interface card with a card edge connector for engaging a card edge connector of a splitter card. While the closest prior art, Frazier et al [US 6,430,288 B1], Guenther et al [US 6,438,226 B1], and Staber et al [US 6,137,866] each teach **splitter architectures**, Frazier et al using plurality of POTS splitter cards, Guenther et al using at least one splitter circuit, and Staber et al using an xDSL splitter circuit, none of them show or suggest combination of an interface card with a card edge connector for engaging a

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card edge connector of a splitter card. As such, the prior art, either singularly or in combination, fail to anticipate or render the above underlined limitation obvious. Hence, claim 69 is allowable.

Claims 28, 31, 33, 35, 37, 44, 51, 53 are essentially similar to claim 69 and hence they are also allowable.

Claim 30 being dependent from claim 28, claims 32 and 66 being dependent from claim 31, claims 34 and 67 being dependent from claim 33, claims 36 and 68 being dependent from claim 35, claims 38-40, 42-43 being dependent from claim 37, claims 45-47, 49-50 being dependent from claim 44, and claims 54-56 being dependent from claim 53 are also allowable.

Dependent claims 5, 24, 27, 60 and 63 are objected to because of the similar reasons as stated above.

Claims 6-8 being dependent from claim 5, claims 25-26 being dependent from claim 24, and 61-62 being dependent from claim 60 are also objected to.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramnandan Singh whose telephone number is (571) 272-7529. The examiner can normally be reached on M-TH (8:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on (571) 272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ramnandan Singh
Examiner
Art Unit 2646



**SINH TRAN
SUPERVISORY PATENT EXAMINER**